DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA



APR

FILE:

NHIM0-0085-02(164)(165) Barrow Gwinnett OFFICE: Engineering Services

P.I. Nos.: 110600 & 110610

I-85 Managed (HOT) Lanes

March 18, 2010 DATE:

FROM:

Ronald E. Wishon, State Project Review Engineer

TO:

Darryl D. VanMeter, PE, State Innovative Program Delivery Engineer

IMPLEMENTATION OF VALUE ENGINEERING STUDY ALTERNATIVES SUBJECT:

The VE Study for the above projects was held December 1-4, 2009. Responses were received on Recommendations for implementation of Value Engineering Study February 10, 2010. Alternatives are indicated in the table below. The Project Manager shall incorporate the VE alternatives recommended for implementation to the extent reasonable in the design of the project.

ALT#	Description	Potential Savings/LCC	Implement	Comments
A-1	Reduce full depth inside shoulder width to 1 ½" north of I-985	\$5,307,000	No	The Managed Lane System Plan (MLSP), based on the Atlanta Regional Commission's (ARC) Envision 6 and adopted by GDOT in 2009, proposes a 3 general purpose lane section in both directions along the corridor. If partial depth pavement is used for the inside shoulders, future widening to install the third general purpose lane would require the removal of the partial depth shoulder pavement before a new lane could be constructed. In addition, a partial depth shoulder would not be adequate if traffic had to be routed onto the shoulders in response to incidents.
A-3	Reduce the 4 ft buffer between the general purpose and HOT lanes to 2 feet	\$1,480,000	No	As indicated by "A Guide for HOT Lane Development" published by FHWA, the desirable cross section for median-based concurrent high occupancy toll (HOT) lane comprises a 4 ft buffer width between a concurrent HOT lane and a general purpose lane. Since a paved median is proposed along the project corridor, the reduction of the buffer width from 4 ft to 2 ft would not result in cost savings. In addition, a 2 ft buffer would prohibit future installation of pylons or traffic channelizers.

A-4	Reduce the 4 ft buffer to 2 ft, reduce the 8 ft shoulder to 4 ft, eliminate the asphalt section in the median and substitute cable rail for the concrete median barrier	\$9,464,000	No	The savings determined by the VE Team included savings from reducing the width of the inside shoulder to 4 ft and utilizing partial depth pavement for the inside shoulders. The 4 ft inside shoulders cannot be achieved given the allowable deflection of the cable barrier system (9 ft minimum, 10 ft preferred). The estimated savings did not take into account the special drainage considerations with regard to the narrower median and shallower median ditch that would result from the implementation of the cable barriers. Longitudinal drainage systems similar to that used for a fully paved median with concrete barriers would be required to address the shallow median ditch. Additionally, the estimated savings also included the savings from implementing A-3, which will not be done. The added costs to address the median drainage and the elimination of the savings associated with A-3 would reduce the savings to \$2,125,543. These savings would be offset by the additional maintenance costs of the grassed median and the replacement costs of the cable barriers
A-6	Widen proposed HOT lanes using an 11 ft lane versus a 12 ft lane	\$2,033,000	No	should incidents occur. The minimum cross section for median based concurrent HOT lane established in "A Guide for HOT Lane Development" indicates a 12 ft HOT lane. A 12 ft lane width would better accommodate the buses using the HOT lanes. Because the median would be paved, no savings would result from reducing the HOT lane width from 12 ft to 11 ft.
B-1	Eliminate general purpose lane milling and resurfacing north of I-985 to SR 211	Proposed = \$6,395,000 Actual = \$5,690,100	Yes	This will be done with a slight modification. The milling and resurfacing along I-85 will be extended to the interchange at SR 20. There are lane transitions, both northbound and southbound, on I-85, south of SR 20 that will require restriping to accommodate the addition of the HOT lanes. The savings have been adjusted to accommodate the revised limits of resurfacing.
C-7	Defer the southbound extension of the HOT lane to I-985	\$2,838,000	No	This ramp inclusion is part of the value and safety added portion of the project for a minimal cost. The proposed ramp will provide revenue as part of the HOT system that would be lost if not constructed at this time. The I-985 southbound HOT connection will eliminate a weave should drivers attempt to cross multiple lanes, after entering I-85 from I-985, to access the HOT lane.

NHIM0-0085-02(164)(165) Barrow Gwinnett Implementation of Value Engineering Study Alternatives

The following VE recommendations apply only if the design exception for the substandard shoulder width along the proposed I-85/I-985 HOT connection is not approved. Currently the proposed I-85/I-985 HOT connection is to utilize existing I-985 northbound; this would result in substandard shoulder widths and constrain the design speed to 45 MPH due to limited horizontal sightline offset. If the design exception is not approved, an additional \$2,203,975 in construction cost would be required in order to construct the proposed I-985 southbound HOT connection, the proposed I-85 southbound bridge to accommodate the proposed I-985 southbound HOT connection, and to replace the existing I-985 northbound

-	er Ivy Creek.			
C-8.1	Relocate I-985 SB HOT lane to new flyover structure over I-85 SB	\$1,495,000	No	The contour information was not available at the time of the VE Study. This option incorrectly assumes that 30 ft high walls can be used; based on the contour information now available these walls would be 50 ft or more. The recommendation also assumes that no walls will be needed along the approaches when in fact they are. The proposed bridge length would be 1200 ft, not 600 ft as suggested. With the implementation of C-9 below, the southbound detour cost will be reduced by half. Given these conditions, the implementation of this recommendation would actually result in an increase of construction costs by \$1,172,960.
C-8.2	Relocate I-985 SB HOT lane to new underpass structure under I-85 SB	\$1,591,000	Yes	This will be done.
C-9	For Alternate 1 Design option: use I-85 SB detour roadway for permanent realignment	\$493,000	Yes	This will be done.
C-10	Reduce the length of the I-85 SB bridge over I-985 HOT lanes	\$498,000	No	Since C-8.2 will be implemented, C-10 is no longer a feasible option.
J-2	Widen and rehabilitate the existing I-985 SB Bridge over Ivy Creek	Cost increase (-\$792,000)	No	The proposed improvements cannot be accomplished while maintaining two operational lanes on the existing bridge; therefore this would not be a simple widening. An additional stage would be required during staging making the proposed cost increase even larger.

The Office of Engineering Services concurs with the Project Manager's responses.

Kendra Bunker with FHWA submitted a question: For Recommendation B-1, reducing the mill and resurface areas along I-85, the VE Study states that the pavement in this area is in good condition and does not require resurfacing. What kind of analysis was done to determine the condition of the pavement, and what is the remaining life of the pavement? If the pavement still has several years left, the implementation of this recommendation makes sense, but if it will need resurfacing in 2-3 years, it might make more sense to do so during construction.

NHIM0-0085-02(164)(165) Barrow Gwinnett Implementation of Value Engineering Study Alternatives

The Project Manager responded with the following which was deemed satisfactory by Ms. Bunker:

The PACES pavement evaluation provided by the District office indicated the pavement surface is still in good shape. The PACES reports are attached. The asphalt sections received ratings between 84 and 86 through the project area. The roadway was resurfaced last in 2000 and 2002. Project PI M001007 was a deep mill project where the asphalt was removed to the old concrete pavement and resurfaced with new base, binder and topping.

Project	PI	Description	Let Date
NHS-M000- 00(459)	M000459	I-85 FM N OF SR 20 TO BARROW CO LN	7/28/2000
NHS-M001- 00(007)	M001007	I-85 FM OLD PEACHTREE RD N TO SR 20	1/25/2002
NHS-M001- 00(027)	M001027	I-85 FM S OF SR 211/BARROW TO S OF SR 15/US 441/BANKS	2/22/2002

Additional comments were submitted by David Painter with FHWA: I agree with all the HNTB recommendations. I think that the VE actually went beyond the normal purpose of VE in that it proposed eliminating important features and functions of the project. Fortunately, HNTB rejected all of those VE recommendations. I do think that FHWA can add some value to this process in the following areas:

- 1. As opposed to the HNTB recommendation M&I south of 20 and nothing north I recommend Micromilling south of 20 and 12" wide Micromilling of the inside edge line to the north. The Micromilling would remove only the PEM with its associated striping, which would no longer be correct with the construction of the HOV/HOT facility. Micromilling would be faster and cheaper than M&I. It would still allow construction of a "staggered" joint in the HMA structure that is being widened by this project to the inside.
- 2. While the VE packet did not have all background information, I recall that retaining the existing bridge and reuse of it as an HOV/HOT bridge was originally a FHWA suggestion. It makes sense to me that it would need to be made slightly wider to avoid a Design Exception for shoulder width and offset sight distance. The estimated cost to modify, \$0.79M as opposed to replace, \$2.35M also makes sense and is money well spent. This is the course that I would recommend that GDOT follow.

NHIM0-0085-02(164)(165) Barrow Gwinnett Implementation of Value Engineering Study Alternatives

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Gerald M. Ross, PE, Chief Engineer

Approved:

Rodney Barry, PE, FAWA Division Administrator

REW/LLM

Attachments

R. Wayne Fedora/Kendra Bunker/David Painter - FHWA

Ben Buchan

Darryl VanMeter/Mike Dover/John Hancock

Paul Liles/Bill Duvall/Bill Ingalsbe/Vince Wilson

Laura Rish

Randall Davis/Harold Mull

Ken Werho

Lisa Myers

Matt Sanders

Recommended for Approval

DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA

INTERDEPARTMENTAL CORRESPONDENCE

FILE NHIM0-0085-02(164) & (165)

P.I. Nos.: PI # 110600 & 110610

OFFICE Innovative Program Delivery

I-85 HOT Extension Projects

DATE February 5, 2010

FROM Darryl D. VanMeter, P.E., State Innovative Program Delivery Engineer

TO Ronald E. Wishon, State Project Review Engineer

SUBJECT Value Engineering Final Report Response

Please find attached the Reponses to the Value Engineering Final Report for the above referenced projects.

If there are any questions, please contact John Hancock at 404-631-1711.

DVM:JDH

HNTB Corporation Engineers Architects Planners 3715 Northside Parkway 400 Northcreek, Suite 600 Atlanta, GA 30327 Telephone (404) 496-5700 Facsimile (404) 841-2820 www.hntb.com

HNTB

Date

2/1/10

To

John Hancock

GDOT Innovative Program Delivery

From

Tim Heilmeier, PE

PROJECT

CORRESPONDENCE

Subject

PI # 110600 & 110610 - I-85 HOT

Extension Projects

Reference is made to the recommendations that were contained in the Value Engineering Study Report dated December 30, 2009 for the above referenced project. Our responses to the recommendations are as follows:

General Recommendations:

VE Recommendation A-1: Substitute shoulder pavement for the full depth pavement along the added HOT lane shoulders north of I-985

HNTB's Response: Do not implement

This recommendation suggests that the currently proposed full-depth inside shoulder along I-85 be reduced from 8 feet to 1.5 feet and the remaining 6.5 feet of full depth pavement be replaced with shoulder pavement north of I-985. This recommendation was estimated in the VE Study to save \$5,307,000 in construction costs.

HNTB does not recommend utilizing partial depth pavement for the inside shoulders along the project corridor. The Managed Lane System Plan (MLSP), based on the Atlanta Regional Commission's (ARC) Envision 6 and was adopted by the Department in 2009, proposes a 3 general purpose (GP) lane section in both directions along this corridor. If partial depth pavement is used for the inside shoulders, future widening to install the third GP lane would require the removal of the partial depth shoulder pavement before a new lane could be constructed. In addition, a partial depth shoulder would not be adequate if traffic has to be routed on the inside shoulders in response to incidents.

VE Recommendation A-3: Reduce the 4-foot buffer zone next to the HOT lanes to a 2-foot buffer zone

HNTB's Response: Do not implement

The recommendation suggests that the section north of I-985 along I-85 should maintain the same 2-foot buffer width for both continuity and driver expectancy. Currently a 2-foot buffer is proposed from Old Peachtree Road to I-985, and a 4-foot buffer is proposed from just north of I-985 to S.R. 211. This recommendation was estimated in the VE Study to save \$1,480,000 in construction costs.

HNTB would not recommend reducing the buffer width from 4 feet to 2 feet. As indicated by "A Guide for HOT Lane Development" published by Federal Highway Administration, the desirable cross section for median-based concurrent high occupancy toll (HOT) lane comprises a 4-foot buffer width between a concurrent HOT lane and a GP lane. Especially since paved median is proposed (please see response to VE Recommendation A-4 below) along the project corridor, the reduction of the buffer width from 4 feet to 2 feet would not result in cost savings. In addition, a 2-foot buffer would prohibit future installation of pylons or traffic channelizers.

VE Recommendation A-4: Modify the median north of SR 20 and use cable barrier

HNTB's Response: Do not implement

This recommendation suggests using grassed median with a reduced paved inside shoulder width and cable barriers in-lieu of the paved median with concrete barriers. The estimated savings determined by the VE Team included the savings from reducing the width of the inside shoulders to 4 feet and utilizing partial depth pavement for the inside shoulders. The 4-foot inside shoulders suggested by the VE Team cannot be achieved given the allowable deflection of the cable barrier system adopted by the Department is 9 feet minimum and 10 feet preferred. In addition, the estimated savings did not take into account the special drainage considerations with regard to the narrower median and shallower median ditch that would result from the implementation of the cable barriers. Longitudinal drainage systems similar to that used for a fully paved median with concrete barriers would be required to address the shallow median ditch. Lastly, the estimated savings also included the savings from implementing VE Recommendation A-3 (reducing the buffer from 4 feet to 2 feet).

HNTB estimates the added costs to address the median drainage concerns resulting from the implementation of the cable barriers and the elimination of the savings from the reduction of the inside shoulder width and the buffer width would decrease the savings from the estimated \$9,464,000 to approximately \$2,125,543. The cost savings would be offset by the maintenance costs of the grassed median and the replacement costs of the cable barriers should incidents occur.

VE Recommendation A-6: Reduce the width of the HOT lane to 11'

HNTB's Response: Do Not Implement

The recommendation suggests using an 11-foot width in-lieu of a 12-foot width for the proposed lanes. This recommendation was estimated in the VE Study to save \$2,003,000 in construction costs.

HNTB would not recommend 11-foot HOT lanes within the project corridor. First, because the proposed median would be paved, no cost savings would result from reducing the HOT lane width from 12 feet to 11 feet. Second, the minimum cross-section for median-based concurrent HOT lane established in "A Guide for HOT Lane Development" published by FHWA indicate 12-foot wide HOT lane. In addition, since buses would be utilizing the proposed HOT lanes, 12-foot lane width would better accommodate the buses.

VE Recommendation B-1: Eliminate the general purpose lane resurfacing north of I-985 along I-85

HNTB's Response: Implement

This recommendation suggests reducing the mill and resurface areas along I-85 by eliminating the areas to the north of the I-985 Interchange. This recommendation was estimated in the VE Study to save \$6,395,000 in construction costs.

HNTB would recommend implementing this VE Recommendation with one modification – the milling and resurfacing along I-85 would be extended to the interchange at S.R. 20 to prevent an appearance of patchwork south of that point. There are lane transitions, along both I-85 northbound and southbound, south of S.R. 20 that will require restriping to accommodate the addition of the proposed HOT lanes. Given the revised limits of resurfacing, HNTB estimates that the recommendation would save \$5,690,100 in construction costs.

VE Recommendation C-7: Defer the southbound extension of the HOT Lane from I-985

HNTB's Response: Do Not Implement

This recommendation suggests that the proposed I-985 southbound HOT connection to the I-85 southbound HOT lane be removed from this project scope and added at a later time. The recommendation was estimated in the VE Study to save \$2,838,000 in construction costs.

This ramp inclusion is part of the "value and safety added" portion of the project for a minimal cost. VALUE: This proposed ramp will provide revenue source as part of the HOT system that would be lost if not constructed at this time. SAFETY: The I-985 southbound HOT connection will eliminate a potentially unsafe weave should drivers attempt to cross multiple lanes, after entering I-85 from I-985, to access the HOT lane. This would be occurring right where I-85 traffic is attempting to weave into I-985 traffic to exit at SR 317.

Contingent Recommendations:

The following VE Recommendations apply if the design exception for the substandard shoulder width along the proposed I-85/I-985 HOT connection is not approved. Currently the proposed I-85/I-985 HOT connection is to utilize the existing I-985 northbound, this would result in substandard shoulder widths and constraint the design speed to 45 MPH due to the limited horizontal sightline offset (HSO). If the design exception is not approved, an additional \$2,203,975 in construction cost would be required in order to construct the proposed I-985 southbound HOT connection, the proposed I-85 southbound bridge to accommodate the proposed I-985 southbound HOT connection and to replace the existing I-985 northbound bridge over Ivy Creek.

VE Recommendation C-8.1: Realign the southbound HOT lane to a separate flyover bridge over I-85 southbound and keep the northbound HOT lane in the existing left off-ramp underpass.

HNTB's Response: Do Not Implement

This recommendation suggests using the existing I-985 northbound as the proposed I-985 northbound HOT connection and then placing the proposed I-985 southbound HOT connection on a new flyover bridge over the existing I-85 southbound. The inverse (underpass) is suggested in VE Recommendation C-8.2. The recommendation was estimated in the VE Study to save \$1,495,000 in construction costs.

The contour information was not available at the time of the VE Study. This option was proposed with the lack of the contour information; it incorrectly assumes that 30' high walls can be used when in fact the elevation difference approaches 50' or more. It also assumes that no walls will be needed along the approaches when in fact they are. The proposed bridge length would actually be 1200 feet, not 600 feet as suggested. Secondly, HNTB intends to implement VE Recommendation C-9 (two stage I-85 southbound bridge construction in-lieu of the use of a detour) which reduces the assumed I-85 southbound detour costs from \$1,000,000 to about \$493,000 for added bridge width and maintenance of traffic costs. Given these conditions, HNTB estimates that the ramp would cost \$4,920,000 while the modified Alternative 1 would cost \$3,747,040, resulting in an increase of \$1,172,960 in construction costs if this recommendation is implemented.

VE Recommendation C-8.2: Realign the southbound HOT lane to a separate underpass with I-85 southbound and keep the northbound HOT lane in the existing left off-ramp underpass.

HNTB's Response: Implement

This recommendation suggests using the existing I-985 northbound for the proposed I-985 northbound HOT connection and then placing the proposed I-985 southbound HOT connection on a new underpass ramp under the existing I-85 southbound. The inverse (overpass) is suggested in VE Recommendation C-8.1. This recommendation also assumes that VE Recommendation C-9 (two stage I-85 southbound bridge construction

in-lieu of the use of a detour) is used which is HNTB's intent. The recommendation was estimated in the VE Study to save \$1,591,000 in construction costs.

VE Recommendation C-9: Alternate Concept, widen southbound I-85 to the inside to allow construction of the new longer bridge to be done alongside the existing bridge and eliminate the detour.

HNTB's Response: Implement

This recommendation suggests using a two stage bridge construction process along I-85 southbound in-lieu of the more extensive temporary detour currently shown. A slightly wider bridge and inside shoulder would be required to accommodate traffic staging. The recommendation was estimated in the VE Study to save \$493,000 in construction costs.

VE Recommendation C-10: Reduce the length of the proposed I-85 southbound bridge over the I-985 HOT ramps.

HNTB's Response: Do Not Implement

This recommendation calls for a three span bridge along I-85 southbound over the proposed I-985 HOT lane connection in-lieu of the proposed four-span bridge. The recommendation was estimated in the VE Study to save \$498,000 in construction costs.

First, VE Recommendation C-8.2 (maintain I-985 northbound HOT in I-985 northbound connector and construct a smaller bridge for I-985 southbound HOT), which recognizes greater cost savings, was selected thereby eliminating this as a viable recommendation. Secondly, to accomplish the suggested span arrangement the proposed I-985 HOT lane connection would need to be moved closer together. The complexity of the horizontal geometry and limited space do not allow for this given the proposed design speed. If the design speed were reduced to 45 MPH to accommodate the required geometry there is no need to construct this design since the preferred option, which is cheaper, already accommodates a 45 MPH design speed.

The following VE Recommendation applies if the design exception for the substandard shoulder widths along the existing I-985 southbound bridge over Ivey Creek is not approved.

VE Recommendation J-2: Widen and rehabilitate the southbound I-985 Bridge to eliminate the narrow 2' shoulders, brush curb and old railing.

HNTB's Response: Do Not Implement

This recommendation suggests widening the existing bridge to provide shoulder widths that would meet the current design standards. The recommendation was estimated in the VE Study to add a construction cost of \$792,000.

The bridge sufficiency rating is 56.67. Careful examination of the bridge inspection report will indicate that the existing bridge is structurally sound and provides safe

passage of traffic. The low rating pertains to the minimal shoulder widths (about 2' on both sides) and lattice style concrete barriers in-lieu of the preferred safety shape barriers.

Costs suggested in the Value Engineering Report do not account for the maintenance of traffic during construction. The proposed improvements cannot be accomplished while maintaining two operational lanes on the existing bridge. Therefore this is not just a simple widening exercise. Traffic during construction could utilize the existing I-985 northbound with additional pavement. This would increase the construction time-frame since an additional stage would be required and would add cost.

Date: 10/22/2009 2:56:33 PM

A. PROJECT LOCATION

County1:GWINNETT

County2: County3:

Project Rating: 86

Office: A5

Rater: Luis Horacio Puerta

Route Type: 1

CountyNO: 135 CountyNO: CountyNO:

Milepost From: 10.2 Milepost From2: Milepost From3: Route No: 0403

Route Suffix: 00 To: 16 To2: To3:

Project Limits: FROM SR 120, TO 985 SPLIT MP. 16.0

Estimated length of the cutter & gutter that requires MILLING(mile): B. ROADWAY INFORMATION
Surface Type: ASPHALT CONCRETE
Typical Pavement Width(ft.): 72

Typical Shoulder Width(ft.): 10

AADT: 198110

Divided Highway: YES

Direction: POS. No. Bridges: 1 % Truck: 24.2

Bridge Width(ft.): 80

C. REMARKS

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Remarks											
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A. PROJECT LOCATION

County1:GWINNETT

County2: County3:

Project Rating: 86

Office: A5

Rater: LUIS H. PUERTA

Route Type: 1 CountyNO: 135

CountyNO:

Milepost From: 16 Milepost From 2: Milepost From3: Route No: 0403

Route Suffix: 00 To: 10.2

To2: To3:

Project Limits: L985 SPLIT TO SR 120 BRIDGE MP 10.2 CountyNO:

Estimated length of the cutter & gutter that requires MILLING(mile):

Divided Highway: YES Typical Shoulder Width(ft.): 10 AADT: 198110 B. ROADWAY INFORMATION Surface Type: ASPHALT CONCRETE Typical Pavement Width(ft): 72

Direction: NEG. No. Bridges: 2 % Truck: 24.2

Bridge Width(ft.): 40-80

C. REMARKS

STAA: NO

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Remarks									
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A. PROJECT LOCATION

County1:GWINNETT County2:BARROW

Project Rating: 84

Office: A5

Rater: Luis Horacio Puerta

Route Type: 1 CountyNO: 135 CountyNO: 013

County3:
Project Limits: FROM 985 SPLIT MP. 16.0 TO JACKSON COUNTY LINE. Estimated length of the cutter & gutter that requires MILLING(mile):

Milepost From: 16 Milepost From2: 0 Milepost From3: Route No: 0403

Route Suffix: 00 To: 28.18 To2: 2.15 To3:

B. ROADWAY INFORMATION
Surface Type: ASPHALT CONCRETE
Typical Pavement Width(ft.): 36

Direction: POS.
No. Bridges: 2
% Truck: 24.2 Divided Highway: YES Typical Shoulder Width(ft.): 10 AADT: 110740

Bridge Width(ft.): 50-36

C. REMARKS

STAA: NO

		T	T													
Remarks																
Crack	Greater than 1/8 inch?	2 2	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	
Seg. Rating	BuiteA (8 8	90	96	96	90	86	88	82	96	96	88	93	96	87	
	Patches & Potholes	,	7		-	F	T		2	1	7			F		1
22 23	(Abri8\1) #AgiA	t					T		T							
Cross	Left (1/8 inch)	1														
s Pavement Section	Severity (1,2,3)							L								
Sec Sec	aldms2 to %															
Corrugation Loss Pavement /Pushing Section	Severity (1,2,3)														-	
Corrugatio /Pushing	9lgme2 to %															
ing/	Severity (1,2,3)							de la								
Bleeding/ Flushing	% of Sample															
ge ress	Severity (1,2,3)														100	
Edge Distress	% of Sample											1				
a li	Severity (1,2,3)			-	1				ľ							_
Raveling	aldmes to %			30	3				-	3			1	2	1	10
scking	Severity (1,2,3)											1	1	1	1	
Reflection Cracking	Total Length															
Reflect	No. of Cracks															
- 22	Severity (1,2,3)		Ī				1			1						
Block Cracking	9)dme2 to %			1			24		20	24						
	5everity 4															
Load Cracking	E yineve															
oad Cr	Severity 2	5														
2	I yjinava	3	00	2									8			10
epth	(1/8 inch) (1/8 inch)	17	1	-		-	Н	1	1	1	1	1	1	1		-
Rut Depth	(1/8 inch) (1/8 inch)) "		7	1	1	1	1	1	Н	1	1	-	٦	1	+
	roject Limit	90	1	٥	0	0	0		0	1	0	0	0	0	0	-
	(£,S,1) oN and	7		7	7	2	2	2	2	2	2	2	2	2	2	٦
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Sample	onuţλ	-		135	135	013	013	135	135	135	135	135	135	135	135	-
		36	1	27	28.2	1	2	17	18	19	20	21	22	23	24	1
N N		Prom 10	67	56	27	0	1	16	17	18	19	20	21	22	23	1

Date: 10/23/2009 2:00:01 PM

A. PROJECT LOCATION

County1:GWINNETT
County2:BARROW

County3:

Project Rating: 85

Office: A5

Rater: LUIS HORACIO PUERTA

Route Suffix: 00

Route Type: 1 CountyNO: 135 CountyNO: 013

CountyNO:

Milepost From: 28.18 Milepost From 2: 2.15 Milepost From3: Route No: 0403

To: 16 To2: 0 To3:

B. ROADWAY INFORMATION

Estimated length of the cutter & gutter that requires MILLING(mile):

Project Limits: JACKSON COUNTY TO I-985 SPLIT

Surface Type: ASPHALT CONCRETE Divided Highway: YES Typical Pavement Width(ft.): 36 Typical Shoulder Width(ft.): 10 STAA: NO AADT: 110740 STAA: NO

No. Bridges: 2 % Truck: 24.2

Direction: NEG.

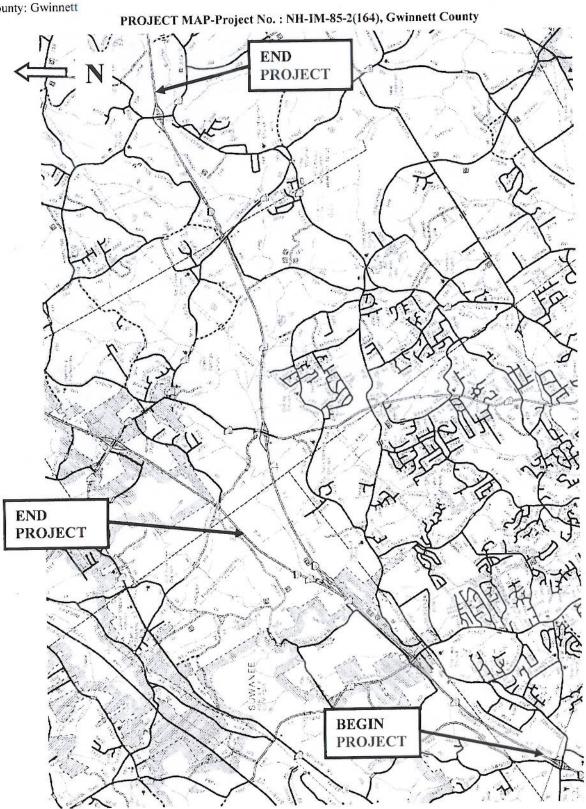
Bridge Width(ft.): 50-36

C. REMARKS

			_	_		_	_	_	_			_	_	_		_	1
Remarks																	
Crack	III I	Greater than 1/8 inch?	NO	ON	ON	ON	ON										
Seg.	Rating	gniteA ?	77	92	82	91	83	84	96	83	98	81	86	92	87	96	
	1	Patches & Potholes	7		-			1	1	Γ		1			1	1	
52	S	(Abni8\1) tdgiR		10		T		T				Γ					
Cross	Slop	(doni 8\1) fìel															
vernent	uo.	Severity (1,2,3)															
oss Pa	Section	% of Sample			1												١
Corrugation Loss Pavement	Suic	Severity (1,2,3)															1
Corrug	/Pushing	9ldme2 to %															
	ing	Severity (1,2,3)			Ī	1											
Bleeding/	Flushing	% of Sample															
•	ess	Severity (1,2,3)	-	l		†	1	1									
Edge	Distr	9 dme2 to %		T			1			T	1						
-	9	ς (1,2,3)	1	1	٠,	4	1	1	7	T				-	1		
0	Mayer	eldme2 to %	10	5	3 5	2	1		30		7	1		6	77		
		Severity (1,2,3)		T													P
	Reflection Cracking	Total Length															
	eriect	No. of Cracks		T	T	1				1			1				
		δενετίτγ (1,2,3)		1	1		7									7	
Block	Cracking	eldme2 to %			1		30									5	
-		5 everity 4	T	1	1							1					
- 10	cking	Severity 3		1	T					1							Ī
	Load Cracking	Severity 2	1														
	2	Severity 1	5			52		20	10		20		22			15	
_	bth	(1/8 inch) (1/8 inch)	1	-1	ᅱ	-	H	1	7	-	-	7	-	-	7	1	٦
	Rut Depth	(1/8 inch) (1/8 inch)	7	7	7	-	1	1	1	П	7	1	1	1	1	1	1
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		(£,2,1) oN 9ns	1	7	7	2	2	2	2	2	2	2	2	2	1	2	6
ion		ane Direction	-	NEG.	NEG.	NEG.	NEG.	NFG									
Locat		ample Location	S	00	9	80	00	80	9	9	9	9	8	8	9	8	×
Sample Location		λ ₁ uno	1	013	013	135	135	135		135	135	135	3 135	135	5 135	5 135	7 135
	tsor	F.	~ I	0	1	16	17	18	19	20	21	22	23	24	25	56	77
0	Milepost		IIIO II	7	2	17	18	19	20	21	22	23	24	25	26	27	38.3
1				_	_	_	_	_	_	_	_		_	-	_	_	-

Project Concept Report - Page 2 Project Number: NH-IM-85-2(164)

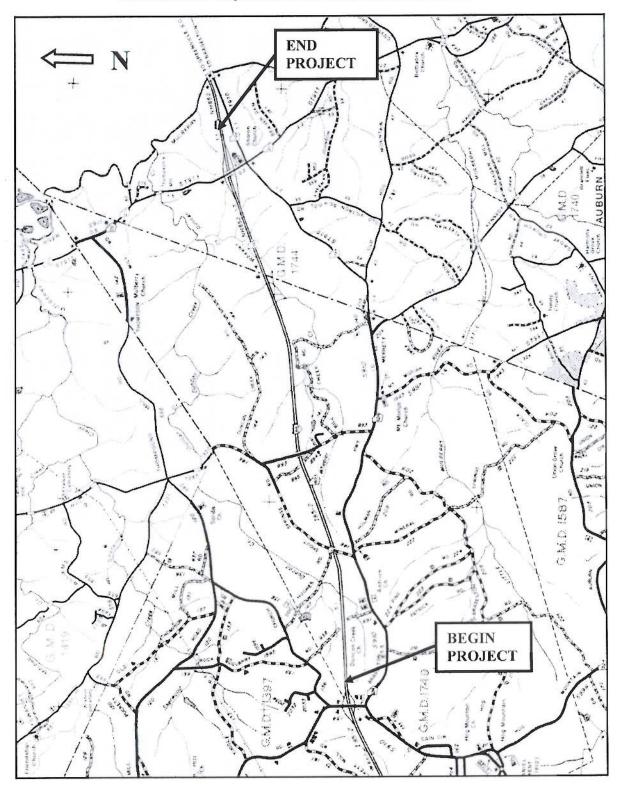
P. I. Number: 110600 County: Gwinnett



Project Concept Report - Page 2 Project Number: NH-IM-85-2(165) P. I. Number: 110610

Counties: Gwinnett/Barrow

PROJECT MAP-Project No.: NH-IM-85-2(165), Gwinnett/Barrow Counties



PRECONSTRUCTION STATUS REPORT FOR PI:110600-,110610-

PROJ ID:	110610-		1-85 FM N OF CR 134/HAMILTON MILL ROAD TO N OF SK 211	34/HAMILTON	MILL ROA	DIONO	F 3R 411						MGMT LEI DATE.		
COUNTY	Rarrow Gwinnett	innett						Tigolan	- SOUCH TANGET	OTIO	eroù	MGMT RC	MGMT ROW DATE:		
COCNIT	Danon, Cr			MPO:	Atlanta TMA	1		PRIORI	1 000	<u>.</u>		BASELINE	BASELINE LET DATE:		
LENGTH (MI)	6.30			11P#	GW-AR-192	2		DOT DIST:	Ë	_		SCHEDI	SCHED LET DATE	12/10/2012	
PROJ NO.:	NHIM0-0085-02(165)	5-02(165)			บดบด			CONG. DIST:	IST:	7	× 35			TOOL	
PROJ MGR: AOHD Initials:	Hancock, John MD	uho		MODEL TR:	Widening			BIKE	į	zı		WHO LETS?	:: a::	110600-	
OFFICE:		Innovative Prog. Delivery	2	CONCEPT:	НОУ			MEASURE:	(E:	<u>ب</u> ۾					
CONSULTANT	F: Consultant Design (DOT contract)	Design (DO	T contract)	PROG TYPE:	Reconstruc	Reconstruction/Rehabilitation	litation	NEEDS	SCORE.	3					
SPONSOR:	GDOT			Prov. for ITS:	z			BRIDGE SUFF:	SUFF:						
DESIGN FIRM:	I: HNTB Corporation	oration		BOND PROJ:	URBANI	URBAN INTERSTATE	111						300.3.3		
BASE BASE	-	LATE	TASKS		ACTUAL	ACTUAL	%				PROGRAMMED FUNDS	FUNDS			
START FINISH		FINISH			State		35	Activity	Annual	Pronosed	Cost	Fund	Status	Date Auth	
-	4/9/2010	6/22/2011	Concept Development Concept Meeting		4/6/2003	12/8/2009	3 8		2001	2001	3,489,284.00		AUTHORIZED	8/8/2000	
	3/25/2010	3/25/2010	PM Submit Concept Report	- Paraman			0 0	CST	LR	LR	138,817,309.04	L050 1	PRECST		
	3/26/2010	4/8/2010	Management Concept Approval Complete				0 5								
		4/6/2010	_		6/17/2009		3 =								
	4/23/2010	9/30/2010	Public Information Open House Held Environmental Approval	0	1/1/2007		P								
			Mapping Field Surveys/SDE		9/21/2001 2/1/2004	10/5/2001	901								
		12/30/2010	V-0110 Feb		1/8/2007		8 0					-			
	4/9/2010	7/8/2010	Underground Storage Lanks 404 Permit Obtainment				0						STIP	STIP AMOUNTS	
	6/15/2011	6/16/2011	PFPR Inspection					PF Cost Est Amt:			Date	Act	Activity	Cost	Fund
	1102/27/1	3/29/2011	_					CST Cost Est Amt	6	93 780,000 00 Date:	Date: 1/6/2009	PE			000
	7/28/2011	8/24/2012	_				00	1000				CST		68,848,000.00	L050
	10/2/2012	10/15/2012				_	0								
PDD:	FF>> NON-AC	E. 6/29/00	FF>> NON-AQE_6/29/00 MAKE SURE TO INCLUDE HOV PROVISIONS_5/21/04. reassigned to Urban	ROVISIONS, 5/21/C	4. reassigned	to Urban.	1,6	200 PMD00			District (District Comments			
	2/4/08.	000000						Approved deliv	ery changed	to DESIGN-B	Approved delivery changed to DESIGN-BUILD on 3/10/09 (JDH 3/23/09)	DH 3/23/09) ing source (3/9/1	O IDH!	
Bridge:	NO BRIDGE REQUIRED	EQUIRED	1AGI 00/0/27					Working on co.	sting plans.	Preparing 10.1	Working on costing plans. Preparing 1O for 1 & 8 study for potential funding source 1-77 to 32-17-1	nemiai iuma	mg somes for		
Design:	Costing plans 1	O negotrated A	Costing plans 10 negotiated, waiting on approv (3/3/03 10 n.) CPINALA wellNotOnSched Aug 10 RWILGIRISH (1-29-10)												
CPA.	BARROW SG	JUTIL 10-2	BARROW SGN UTIL 10-23-00/GWINNETT SGN DO PUB UTIL 6-6-01/RESCISSION LETTER SENT TO	TL 6-6-01 RESCISSI	ONLETTER	SENT TO									
	BARROW 7-22-04	-04		į	700										
Planning:	Work Zone Saf	ety: project c	Work Zone Safety: project considered significant, Transportation Management Plan (1 Mr) required	Management Flan (Mr.) reduned										
Programming:	Series 2 #1 6-07	7	6320/10/01/detad accepts												
Traffic Op:	SEND PLANS	FOR KEVIL	SEND PLANS FOR REVIEW FOR FIFTE 100310033	/24/06											
Utility: FMG:	2062 (H85(94)	W/V88) ;DC	2062 (H85(94)-W/V88) ;DOT=M/S; C=D (JJ&G);PHOTOS TRANS!	ANS			-								
Prol Parcel (T.		Total Pa	Total Parcel in ROW System:		Cond. Filed:	33		Y	Acquired by:		N/R			DEEDS CT:	
		Ontion	Ontine Danding.	Re	Relocations:			Y	Acquisition MGR:	AGR:					
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PROJ ID:		110600-		I-85 FM I-985 TO N OF CR 134/H	HAMILTON MILL RD	MILL RD				MGMT LET DATE:	10/22/2010	
COUNTY:		Gwinnett					oo Ariaoida			MGMT ROW DATE:	06/15/2010	
LENGTH (MI)		7 00		MPO:	Atlanta TMA	ſΑ	PRIORITY CODE:	DE: PIP	•	DASELINE LET DATE		
PROJ NO.:		NHIM0-0085-02(164)	5-02(164)	# dL	GW-AR-191	91	DOT DIST:	_		SASELINE LEI DATE	1/13/2012	
PROJ MGR:		Hancock, John	hh	MODEL YR:	2020		CONG. DIST:	7		soned Let DATE.	2 07/51	Č
AOHD Initials:		MD		TYPE WORK	K. Widening		BIKE:	z		WHO LEIS?	Prepare Plans for Shelf	s ror sneit
OFFICE:		Innovative F	Innovative Prog. Delivery				MEASURE:	ш		LET WITH:	110610-	
CONSULTANT		Proposed C	onsultant D.	Proposed Consultant Design (DOT contract) PROG TYPE:		Reconstruction/Rehabilitation	on NEEDS SCORE:	E: 6				
SPONSOR:		GDOT		Prov. for ITS:	z		BRIDGE SUFF:	ŭ.				
DESIGN FIRM:		HNTB Corporation	oration	BOND PROJ :		URBAN INTERSTATE						
BASE	BASE	START	FINISH	TASKS	START	ACTUAL %			PROGRAMMED FUNDS	SUNDS		
+			4/8/2010	Concept Development	3/29/2001	†	- Activity Approved	ved Proposed	Cost	Fund Status	Date Auth	
				Concept Meeting	12/8/2009	12/8/2009 100	H		00 000 002 3	METHODIZEN	0000/8/8 43	
		3/25/2010	3/25/2010	PM Submit Concept Report		0	*		7 102 547 06			
		3/26/2010	4/8/2010	Receive Preconstruction Concept Approval					271,811,066,61			
			4/6/2010	Value Engineering Study	6/17/2009	83						
		4/23/2010	4/23/2010	Public Information Open House Held		0 ;						
			5/20/2010	Environmental Approval	1/1/2007							
	-	4/36/2010	0100/80/5	Mapping Field Surveys/SDE	4/1/2003	001 6007/71/8						
		5/31/2010	9/10/2010	Preliminary Plans		0 0						
		6/14/2010	7/16/2010	Preliminary Bridge Design		0						
		4/9/2010	8/19/2010	Underground Storage Tanks		0				S	STIP AMOUNTS	
		3/26/2010	6/10/2010	404 Permit Obtainment		-						
		10/4/2010	10/5/2010	PFPR Inspection		0	PE Cost Est Amt:	5,700,000.00	Date:	Activity	Cost	Fund
		10/6/2010	0102/61/01	R/W Plans Preparation			ROW Cost Est Amt:	5,674,100.00 I	Date: 1/6/2009	PE	0.00	500
		11/11/2010	11/15/2010			0	CST Cost Est Amt:	181,877,000.00	Date: 1/6/2009	>	11,901,000.00	L050
		11/24/2010	11/26/2010			0				•		1050
		1/24/2011	3/18/2011	Stake R/W		0						
		5/31/2010	7/28/2010			0	-			- 27		
		2/19/2010	_			0 (
		11/16/2010		Final Design		0						
		1/02/7/1	5/3/2011	Final Bridge Plans Preparation FFPR Instruction								
		6/6/2011	6/17/2011	Submit FFPR Responses (OES)	_	0						
PDD:	FF>	> NON-AQ	E. REASSIG	FF>> NON-AQE REASSIGNED ROAD DESIGN 6/29/00 MAKE SURE TO INCLUDE HOV	NCLUDE HOV				District Comments	mments		
	PRC	PROVISIONS 3/22/99	1/22/99				Annroved delivery ch	Annual delivery changed to DESIGN-BUILD on 3/10/09 (JDH 3/23/09)	ILD on 3/10/09 (JD)	13/23/093		
Bridge:	BRI	BRIDGE REQUIRED	IRED				Working on costing pl	ans. Preparing TO for	T&R study for pote	Working on costing plans. Preparing TO for T&R study for potential funding source (3/9/10 JDH)	9/10 JDH3	
Design:	Cos	ting plans TC) negotiated.	Costing plans TO negotiated, waiting on approv{3/9/09 JDH}						,		
EIS:		Norapydine	Sign-Building	CENOTAPVQLESSgn-Build NotOnsched June10 Kwinsh (3-2-10) CAMPANTET SCN, BO mits 101 101 101 101 101 10 6 6 6 010 ECOSCION 1 ETTER SENT TO CAMPANETT 4 35 05	TOWNING OF T	T 4 35 05						
LGPA:	3 :	INNELLSC	IN DO PUBL	OUILITIES 6-6-01 KESCISSION LETTER SEN	I I I COMINIEI	1 4-23-03						
Planning:		rk Zone Sale	Work Zone Salety project consid	Work Zone Salety, project considered significant, Transportation Management Flan	an (Twir) required	22						
r ogramming:	8	Hene Zalen	TI THEO TO SH	PERSON NEW TONE BELLIEU								
Lraffic Op:	N K	AHINGCO	INSCLIAN	AWAITING CONSOLIANT PEPER PLANS FOR REVIEW								
Uning: FMC:	200	7 (H85/94)-W	OCD SUE, NEED 2ND SUB 11/04/09 2067 (H85/94)-W/V88) DTM: DOT-M	OCD SUE, NEED ZND SUB 11/04/09 2062 (H85/94)-W/V88) DTM-DOT-M/S-C=D (11&G)-(PHOTOS TRANS)								
					2		- In the second	1	TOG		DEFING CT.	
Prel. Parcel CT:	Ë	5	lotal Far	Lotal Parcel in ROW System:	Cond. Filed:		amhae	a où:				
Under Review:	ew:		Options - Pending:	Pending:	Relocations:		Acquisit	Acquisition MGR:				
Released:			Condemn	Condemnations- Pend:	Acquired:		R/W Cert Date:	rt Date:				